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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

Application No.: 09/905,792 ) Date: February 27, 2003  
Applicant: Hao-Chih Chen ) Examiner Jeanne A. Di Grazio  
Filed: July 13, 2001 ) Group Art Unit 2871  
For: "Backlight Unit For A Liquid ) Our Ref: 618932-3/RPB:TGC  
Crystal Display" ) B-4238

#6  
3-1303  
C Brown

Hon. Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

This paper responds to the Office Action dated December 3, 2002. **All remarks herein are made without prejudice.**

REMARKS

At pages 2-4 of the Office Action, the Examiner rejects claims 1-3 and 7-9 under 35 USC 103(a) as being unpatentable over Sakamoto et al. (US Patent No. 6,480,245 B1) in view of Won (US Patent No. 6,046,785). Moreover, at pages 4-5, claims 4-6 are rejected under 35 USC 103(a) as being unpatentable over Sakamoto et al. and Won in view of Tan (US Patent No. 5,075,824). These rejections are respectfully traversed.

The combination of Sakamoto et al., Won and Tan does not disclose, suggest, or teach, *inter alia*, the following features recited by claim 1 of the present application:

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"a light guide plate having a light receiving lateral side ... the first coupling lateral side having a first coupling member and the second coupling lateral side having a second coupling member";

"a light source installed inside the reflector, the light emitted from the light source being reflected by the reflective cover and transmitted into the light guide plate"; and

"wherein the first and second coupling members are respectively combined with the first and second linking members for assembling the reflector and the light guide plate, and a predetermined distance is formed between the reflector and the light guide plate."

Sakamoto et al. discloses an LCD with a lamp reflector grounded to panel housing. The structure of the lamp unit looks similar to the backlight unit in the present application. However, the **objective** in Sakamoto et al. is to ensure that **grounding** of lamp reflector can be reliably performed and that contact deficiencies can be overcome (see e.g. col. 1, line 49-65). In the present application, the main objective is to have a **light and compact backlight unit**, for example, by reducing the thickness of the backlight unit (see page 3, lines 2-12 of the present application).

Since the objective of Sakamoto et al. is quite different from that of the present application, the design of the lamp unit is also quite different. Please compare Fig. 3 of Sakamoto et al. with Fig. 3 of the present application. The design of the present application is clearly **more compact** and presumably **lighter** than that of Sakamoto et al. For example, in Sakamoto et al. the lamp 3, the lamp reflector 4 and the metallic lamp cover 11 are **three separate items** connected together by the screw 15. In the present application, however, the same function is achieved by one item

because the reflector 300, the lamp 340 and the reflective cover 310 are made into one part to reduce the thickness of the backlight unit.

Since in Sakamoto et al. the lamp 3, the lamp reflector 4 and the metallic lamp cover 11 are three separate items, Sakamoto fails to disclose "a light source installed **inside** the reflector", as recited by claim 1 of the present application. At page 3, paragraph 2 of the Office Action, the Examiner acknowledges that Sakamoto does not have a light source specifically installed inside a reflector. However, the Examiner asserts that it "would have been obvious ... to modify Sakamoto to include a light source installed within a reflector to reduce display deficiencies due to electric noise and for obtaining clearer images." The Applicant respectfully disagrees.

Since Sakamoto does not concern the size of the lamp unit, there is **no motivation** to install the light source (lamp) inside the reflector. Sakamoto nowhere teaches that installing a lamp within a reflector can "reduce display deficiencies due to electric noise", as suggested by the Examiner. Instead, Sakamoto teaches securely ground the lamp reflector to reduce display deficiencies. It seems that installing a lamp within a reflector has no relation at all to "reducing display deficiencies due to electric noise". The Examiner's assertion that it would have been obvious to install the light source inside the reflector is not supported by facts and is an impermissible hindsight.

At page 2 of the Office Action, the Examiner asserts that the "light guide plate" of Sakamoto has two coupling members and that the reflectors most likely has two holders. The Applicant respectfully disagrees. Note that the coupling members and the linking members are to connect the lamp reflector 4 and the lamp cover 11 together (with a screw), not to connect

the reflector and the light guide plate. Thus, Sakamoto fails to disclose that "the first and second coupling members (of the light guide plate) are respectively combined with the first and second linking members (of the reflector) for assembling the reflector and the light guide plate, as recited by claim 1 of the present application.

At page 3, paragraph 3 of the Office Action, the Examiner acknowledges that Sakamoto does not have "a **predetermined distance** formed between the reflector and light guide plate", as recited by claim 1 of the present application. However, the Examiner asserts that "Won has a light guide and lamp positioned within a frame wherein a cross-section of the light guide decreases with distance from the lamp" and that it "would have been obvious ... to modify Sakamoto in view of Won to make the reflector and light guide at a predetermined distance for tight assembly and reduction of noise and improved image quality". The Applicant respectfully disagrees.

Won discloses a bracket for tightly attaching a light guide to a frame of an LCD device. As discussed above, Sakamoto teaches reducing display deficiencies by securely grounding the lamp reflector. There seems to be no suggestion or motivation to combine the teaching of Won with Sakamoto because there is no teaching that have a predetermined distance between the reflector and the light guide plate can help grounding the lamp reflector.

Under MPEP 2143, to establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Moreover, the prior art reference (or references when combined) must

teach or suggest all the claim limitations. As discussed above, the Applicant believes that the cited references fail to disclose all limitations of claim 1. Moreover, there is no suggestion or motivation to combine the references as the Examiner suggested. Thus, the Applicant believes that claim 1 is patentable.

Claims 2-9 are also patentable, at least by virtue of their dependency from claim 1. Moreover, these claims are patentable by virtue of the additional limitations recited therein.

The Applicant believes that all pending claims are in condition for allowance and reconsideration of this application is respectfully requested.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account No. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

Examiner Jeanne A. Di Grazio

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Response

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(Date of Deposit)

Troy Guangyu Cai

(Name of Applicant, Assignee or Registered Representative)

(Signature)

(Date)

Respectfully submitted,

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**Expires: November 19, 2003**

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